Bringing Astrobiology Research Alive Through Museum Exhibits

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The California Academy of Sciences—a research institution, natural history museum, aquarium, and planetarium in San Francisco—opened a 2000 square foot exhibit entitled, "Astrobiology: Life in the Extremes" in April 2004, developed in partnership with NAI teams (NASA-ARC and SETI primarily). The exhibit currently focuses on research in hot springs and deep-sea hydrothermal vents as case studies for astrobiology.

The exhibit-development process successfully incorporated contributions from astrobiologists including hundreds of images, captions, specimens, story ideas, and scientific background for the exhibit development team. These collaborations will continue as the Academy re-builds the museum for 2008.

The use of live organisms, physical specimens, familiar touchstones, and human facilitation is believed to enhance learning and engagement by visitors in the CAS astrobiology exhibit. Some of the most popular elements in the exhibit are the brine shrimp, bacterial/diatom community, and Death Valley pupfish tanks. While the use of hundreds of projected images, animations, and video provide a contemporary feel for the exhibit and the science of astrobiology, it can also be overwhelming and disorienting for visitors without appropriate explanations. Docents and interns have conducted public demonstrations on comets, DNA extraction, geology and microscopic life after receiving astrobiology training.

One of the major challenges for a successful small astrobiology exhibit is providing connections and integration between the disparate disciplines and concepts within the field. Given the inter-disciplinary nature of astrobiology, one must use accessible content and creative graphics, lighting, text, and physical layout to allow visitors to explore connections in a non-linear fashion.